

# Honeywell

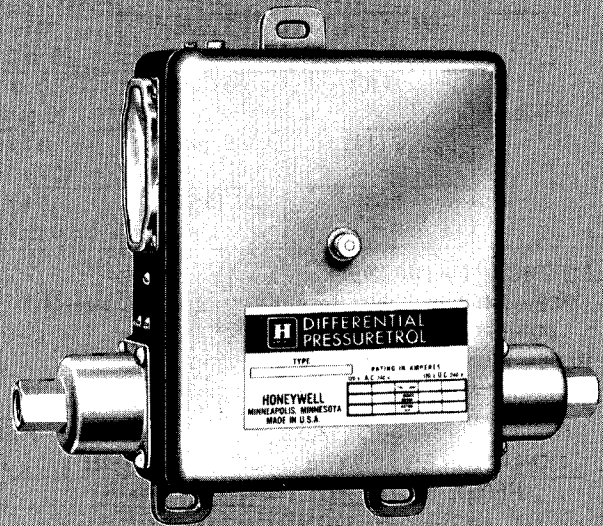
THE P606A AND P906A CONTROLLERS RESPOND TO INCREASES AND DECREASES IN PRESSURE DIFFERENCE BETWEEN HIGH AND LOW SIDE OPERATING PRESSURES IN WATER OR STEAM SYSTEMS. THE P606A PROVIDES 2-POSITION CONTROL IN LINE OR LOW VOLTAGE CIRCUITS. THE P906A PROVIDES PROPORTIONAL CONTROL IN LOW VOLTAGE CIRCUITS AND CAN BE USED TO CONTROL A PROPORTIONAL VALVE TO MAINTAIN DESIRED PRESSURE DIFFERENCE BETWEEN TWO POINTS IN A SYSTEM.

- P606A provides 2-position control through spdt contacts.
- P906A provides proportional control using a 135-ohm potentiometer.
- Adjustable main spring determines pressure difference at which controller operates and against which difference in high and low pressure must act.
- P606A has dust-proof, trouble-free mercury switch.
- Three mounting lugs furnished on each device to facilitate installation.
- Blank scale supplied for marking as required.

G.P.  
REV. 12-82•

Form Number  
60-2155-3

## DIFFERENTIAL PRESSURETROL CONTROLLERS



## P606A, P906A

# SPECIFICATIONS

**MODELS:**

MODEL	BELLOWS OPERATING PRESSURE psi (kPa)		BELLOWS PRESSURE DIFFERENCE RANGE psi (kPa)	INSTRUMENT DIFFERENTIAL AT MIDSCALE OF PRESSURE DIFFERENCE RANGE psi (kPa)		SWITCHING ON DECREASE IN PRESSURE DIFFERENCE
	MINIMUM	MAXIMUM		MINIMUM	MAXIMUM	
P606A	22 in. Hg. Vacuum (74.3)	85 (586)	0 to 45 (0 to 310)	1.5 (10)	30 (207)	Spdt Makes R-B, Breaks R-W
	0 (0)	20 (138)	0 to 10 (0 to 69)	1 (7)	11 (76)	
	2 (14)	85 (586)	0 to 50 (0 to 345)	1.5 (10)	12 (83)	
	5 (34)	225 (1551)	0 to 70 (0 to 483)	4.0 (28)	16 (110)	
	10 (69)	350 (2413)	10 to 300 (69 to 2068)	10.0 (69)	50 (345)	
P906A	22 in. Hg. Vacuum (74.3)	85 (586)	0 to 45 (0 to 310)	1.5 (10)	30 (207)	Proportional
	0 (0)	20 (138)	0 to 10 (0 to 69)	1 (7)	11 (76)	
	2 (14)	85 (586)	0 to 50 (0 to 345)	1.5 (10)	12 (83)	
	5 (34)	225 (1551)	0 to 70 (0 to 483)	4.0 (28)	16 (110)	

**ELECTRICAL RATINGS:**

P906—24 Vac, 3-wire modulating control; 135-ohm potentiometer.

P606—Mercury switch (rating in amperes.)

CONTROLLER	120 V				240 V				
	VOLTAGE TYPE	FULL LOAD	LOCKED ROTOR	RESISTIVE LOAD	hp	FULL LOAD	LOCKED ROTOR	RESISTIVE LOAD	hp
P606A	AC	7.4	44.4	8.0	1/3	3.7	22.2	4.0	1/3
	DC	2.0	20.0	8.0	—	1.0	10.0	4.0	—

NOTE: 7.2 A full load = 1/3 hp at 120 V.  
 4.9 A full load = 1/2 hp at 240 V.  
 3.6 A full load = 1/2 hp at 240 V.

(continued on page 3)

## ORDERING INFORMATION

WHEN PURCHASING REPLACEMENT AND MODERNIZATION PRODUCTS FROM YOUR TRADELINE WHOLESALER OR YOUR DISTRIBUTOR, REFER TO THE PRICE SHEETS FOR COMPLETE ORDERING NUMBER, OR SPECIFY—

1. Model number.
2. Operating pressure.

IF YOU HAVE ADDITIONAL QUESTIONS, NEED FURTHER INFORMATION, OR WOULD LIKE TO COMMENT ON OUR PRODUCTS OR SERVICES, PLEASE WRITE OR PHONE:

1. YOUR LOCAL HONEYWELL RESIDENTIAL SALES OFFICE (CHECK WHITE PAGES OF YOUR PHONE DIRECTORY).

2. RESIDENTIAL GROUP CUSTOMER SERVICE  
 HONEYWELL INC., 1885 DOULGAS DRIVE NORTH  
 MINNEAPOLIS, MINNESOTA 55422 (612)542-7500

(IN CANADA—HONEYWELL LIMITED/HONEYWELL LIMITEE, 740 ELLESMERE ROAD, SCARBOROUGH, ONTARIO M1P 2V9). INTERNATIONAL SALES AND SERVICE OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD.

**CONTROL ACTION:**

P606A—Closes R-B contacts and opens R-W contacts on decrease in pressure difference.

P906A—Single potentiometer wiper contacts B on decrease in pressure difference.

**ADJUSTMENT MEANS:** Screw on top of case.

**BELLOWS CONNECTION:** 1/4-18 NPT.

**FINISH:** Gray.

**DIMENSIONS:** See Fig. 1.

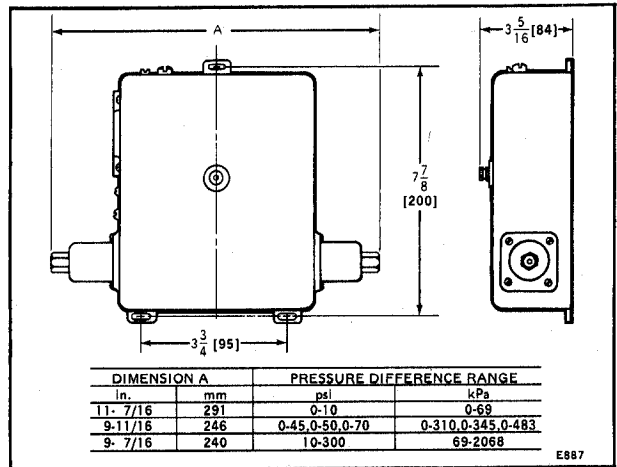


FIG. 1—DIMENSIONS OF P606A, P906A IN in. [mm IN BRACKETS].

# INSTALLATION

**WHEN INSTALLING THIS PRODUCT . . .**

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

CAUTION

Disconnect power supply before beginning installation to prevent electrical shock and equipment damage.

**MOUNTING**

Mount the controller on a surface that is free of excessive vibration. Level the control using the leveling pendulum (Fig. 5). This is necessary for proper mercury switch operation.

When the control is used in steam applications, it should be mounted above the level of the steam main. If this cannot be done, provide a trap to prevent condensation from collecting above the control's bellows.

**NOTE:** To prevent strain on the bellows, use the proper fittings when connecting the tubing or pipe to the bellows connections (see Fig. 2). Use care when running lines so that pipe dope and scale do not get into the internal lines.

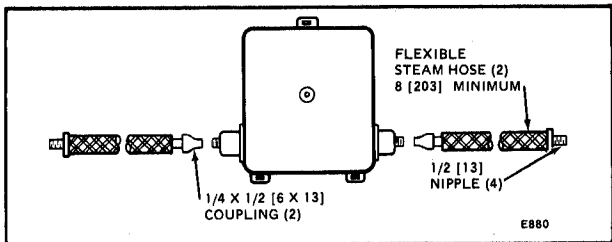


FIG. 2—RECOMMENDED TUBING FITTINGS.

**WIRING**

Disconnect power supply before beginning installation to prevent electrical shock and equipment damage. All wiring must comply with local electrical codes and ordinances. See Fig. 4 for typical system hookup.

Internal schematics of these controllers are shown in Fig. 3.

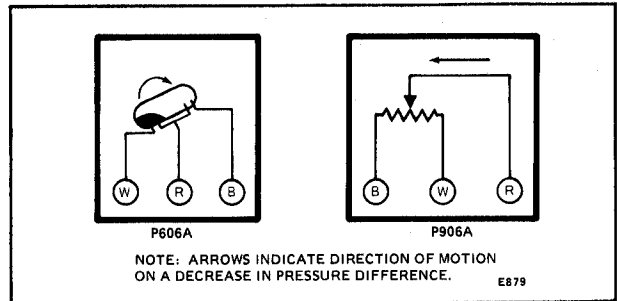


FIG. 3—P606A AND P906A INTERNAL SCHEMATICS.

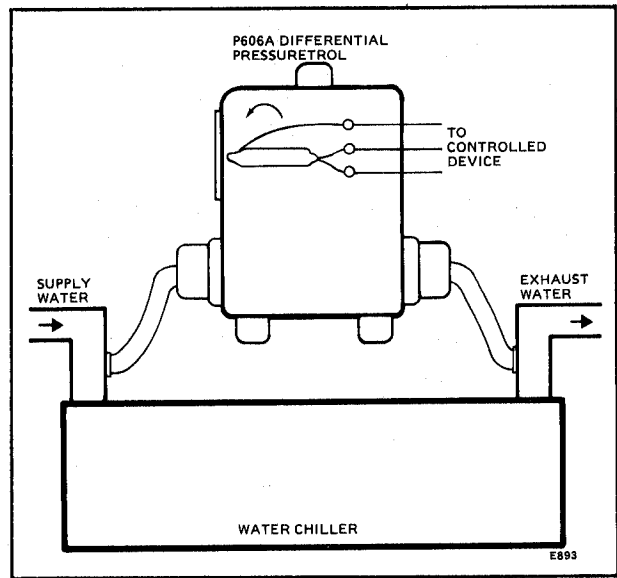


FIG. 4—TYPICAL SYSTEM HOOKUP.

# ADJUSTMENTS AND CHECKOUT

## PRESSURE DIFFERENCE ADJUSTMENT

Because these controllers have such a wide variety of applications, they are adjusted on the job with the system in operation.

### IMPORTANT

The device controls the difference between the pressures exerted upon the 2 bellows, not the gauge pressure.

1. Connect a pressure gauge with adequate range to each element assembly.

2. Connect the Pressuretrol controller and gauges to the pressure points to be controlled, or use a compressed air supply to duplicate actual pressures.

3. Turn the differential adjustment screw and the pressure difference adjustment screw counterclockwise (Fig. 5 or 6) until the scale indicators reach the low (minimum) end of the scale.

NOTE: Do not go beyond the point at which the linkage begins to show slack.

4. Apply typical operating pressures in sequence to the left and right elements (high and low pressure sides, respectively). Turn the pressure difference adjustment screw clockwise until the mercury switch just makes or breaks the circuit. This is the switch action on a decrease in pressure difference.

The proportional Pressuretrol (P906A) must be calibrated with the device it operates. The Pressuretrol is set for the pressure difference between the high and low pressures on the control.

5. Increase the pressure differential applied to the Pressuretrol controller by the amount of the differential setting.

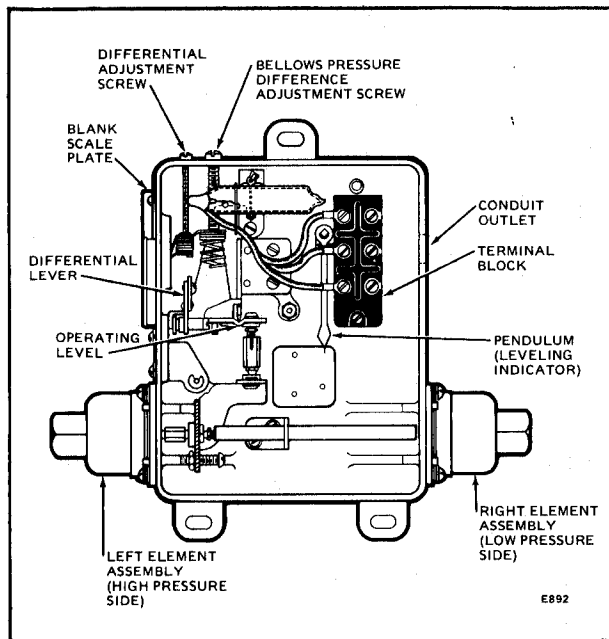


FIG. 5—INTERNAL VIEW OF THE 2-POSITION CONTROLLER.

6. Turn the differential adjustment screw clockwise until the mercury switch rotates and then stops at approximately the horizontal position. Continue turning the adjustment screw an additional 2 turns.

Manually rotate operating lever clockwise until the mercury switch makes or breaks the circuit. Allow the operating lever to slowly return to its original position. If the mercury remakes or rebreaks the circuit, turn the differential adjustment screw clockwise an additional turn. Then repeat the check with the operating lever.

Turn the differential adjustment screw counterclockwise until the mercury switch just makes or breaks the circuit. This is the switch action on an increase in pressure difference.

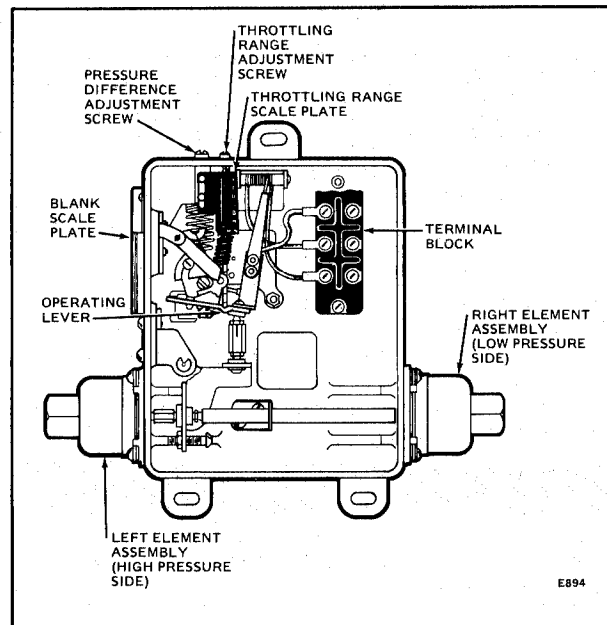


FIG. 6—INTERNAL VIEW OF THE MODULATING CONTROLLER.

### IMPORTANT

If the pressure difference set point adjustment is at minimum, be certain that there is no slack in the linkage.

7. Apply pressures through a typical cycle while checking Pressuretrol controller operation. Readjust settings if necessary. If there is any indication of short cycling or a hunting condition, increase the differential setting.

8. When the system operates as desired, mark the settings on the scaleplate.

9. Remove the gauges and connect the Pressuretrol controller into the system with the higher pressure or the left element and the lower pressure on the right element.

## CHECKOUT

Check operation of controller after installing in system.

Dear Customer,

We welcome your comments and suggestions for improving this publication. Your assistance is greatly appreciated and will enable us to provide better technical information for you.

Please send your comments and suggestions to:

Honeywell Inc.  
10400 Yellow Circle Drive  
Minnetonka, Minnesota 55343  
ATTN: Publications Supervisor MN38-3247

HONEYWELL MINNEAPOLIS, MN 55408 INTERNATIONAL Sales Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

PRINTED IN U.S.A.

## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>